

Response re: 09/842,225

REMARKS

Claims

Claims 37-39 and 43 are pending. Claims 37-39 and 43 have been amended to be substantially the same as originally filed claims 37-39 and 43 with some typographical revisions.

For the Examiner's convenience, a sheet setting out clean versions of currently pending claims 37-39 and 43 is enclosed.

Response to Restriction Requirement

The Applicant confirms the election of Group VI (claims 37-39 and 43) without traverse.

Conclusions

In view of the amendments and comments presented above, the Applicant submits that it has properly responded to the restriction requirement. The Applicant respectfully requests consideration of this application on the merits and looks forward to receiving favourable action on this application.

Respectfully submitted,



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MAY 07 2003

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**Clean Version of Currently Pending Claims**

37. A method for directing any one of a plurality of input optical signals to any one of a plurality of output signal channels in an optical cross-connect switch, the method comprising detecting a Moiré interference pattern and determining therefrom a position of at least one element in said switch, said element capable of at least one of: directing said one output signal channel so as to receive said one input optical signal and directing said one input optical signal so as to be received by said one output signal channel.
38. A method for directing any one of a plurality of input optical signals to any one of a plurality of output signal channels in an optical cross-connect switch, the method comprising detecting a Moiré interference pattern and determining therefrom a position of at least one of: a receiving end of said one output signal channel and a transmitting end of an input signal channel associated with said one input optical signal.
39. A method of establishing optical communication in an optical cross-connect switch between a first optical fiber and a second optical fiber selected from a plurality of optical fibers, said method comprising detecting a Moiré interference pattern and determining therefrom a position of at least one of: (a) an end of said first optical fiber; (b) an end of said second optical fiber; (c) an optical element operative to influence an optical path between said first and second optical fibers; and (d) a plurality of optical elements operative to influence an optical path between said first and second optical fibers.
43. An optical fiber cross-connect switch comprising first and second groups of optical fiber switching units, disposed in optically opposing relation, each of the switching units in one of said first and second groups further comprising:
  - (a) an optical fiber operative to conduct optical signals; and
  - (b) a position encoder operative to detect a Moiré interference pattern and determine therefrom a position of at least one of: (i) an end of said optical fiber; (ii) an optical element operative to influence an optical path of optical signals associated with said fiber; and (iii) a plurality of optical elements operative to influence an optical path of optical signals associated with said signal emitted from or coupled into the fiber.